

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Patent Application

Inventor(s): Ronald Van Haalen et al.

Case: LCNT/vanHaalen

Serial No.: 10/621,060 **Group Art Unit:** 2616

Filed: 07/16/2003 **Confirmation #:** 8826

Examiner: Moore, Ian N.

Title: Communication Network Comprising At Least A Source And A Switch
for Receiving and Forwarding Data Packets Originated By The Source

MAIL STOP AMENDMENT
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SIR:

RESPONSE AMENDMENT

In response to the non-final Office Action mailed May 29, 2007, please reconsider
the above-identified patent application as follows.

In the event that an extension of time is required for this response to be
considered timely, and a petition therefor does not otherwise accompany this response,
any necessary extension of time is hereby petitioned for.

The Commissioner is authorized to charge any fees due, including extension of
time and excess claim fees, to counsel's Deposit Account No.
20-0782/LCNT/VanHaalen.

IN THE SPECIFICATION

Please replace the title of the invention with the following title:
A SWITCH ADAPTED TO FORWARD DATA PACKETS FROM A SOURCE

Note: The following amendments to paragraphs within the "Detailed Description" portion of the specification are implemented in correspondence with the drawing amendments requested by the examiner.

Please replace page 5 lines 25-30 to page 6 lines 1-7 with the following amended paragraph:

Figure 1 shows a communication network N100 comprising switch S1 and a switch S2. The network N100 comprises between the switch S1 and switch S2, two paths I, IIpath I and path II. Switch S2 comprises a port p2 for receiving packets originating from source A as forwarded by switch S1 along path II and a port p1 for receiving packets forwarded by switch S1 along path I. From source A the packets 1,2,3,4 are sent with destination address Baddressed and sent to destination B. After forwarding data packet 1,2 from switch S1 along path I the route from switch S1 to switch S2 is changed from path I to path II, as shown in figure 2. Hence, data packets 3,4 are forwarded along path II towards switch S2. Path II is in this example faster than path I. Figure 3 shows that data packet 1 is received at port p1 of switch S2, while data packet 2 is still traveling along path I and data packets 3,4 are still traveling along path II. As path II is faster than path I, data packet 3 is received at port p2 of switch S2 before data packet 2 has arrived at port p1 of switch S2. This is shown in figure 4.

Please replace page 6 lines 8-19 with the following amended paragraph:

According to the invention, in this situation data packets arriving at port p1 are for a period of time discarded once data packets forwarded by switch S1 are received at port p2 of switch S2. Figure 5 shows in accordance with the invention that data packet 2 is not forwarded by switch S2 to destination B and figure 6 shows that data packet 2 is discarded by port p1 while data packet 4 is received at port p2 of switch S1. Within the

context of this specification receiving a data packet implies accepting the data packet and if needed forwarding the data packet. Discarding a data packet implies not accepting the arrival of a data packet. It follows that data packet 4 is not discarded and is forwarded by switch \$2 towards destination address B, finally leading to the arrival of data packets 1,3 and 4 at destination address B as shown in figure 7.

Please replace page 6 lines 20-25 with the following amended paragraph:

It is of course also possible that switch \$2 comprises many more ports p1, p2, ..., pxport 1, port 2...port x for receiving data packets forwarded by the particular switch \$1. In that case it is possible that instead of discarding data packets for a period of time only at port p1 upon receiving data packets at port p2, data packets are for a period of time discarded at all other ports p1, ..., pxports 1...port x apart from at port p2.

Please replace page 6 lines 26-30 to page 7 lines 1-2 with the following amended paragraph:

It is equally possible that the source is capable of sending data packets via two or more different paths to switch \$1. Re-ordering is in this case prevented as long as switch \$1 is arranged as switch \$2, i.e. according to the invention. In other words, as long as switch \$1 is arranged to discard for a period of time any data packet originating from the source A at port p1 upon receiving a data packet originating from the source A at port p2 after receiving a data packet originating from the source at port p1, re-ordering is prevented.

Please replace page 7 lines 3-8 with the following amended paragraph:

Although the example only shows one source, it is also possible that a plurality of sources is capable of sending data packets to switch \$1. As a switch is capable of extracting from the data packet information related to the source from which the data packet originates, the switch may according to the invention at one or more ports discard or accept data packets depending on the source from which the data packet originates.

Please replace page 7 lines 9-20 with the following amended paragraph:

A period of time may last till switch S2 is informed that re-ordering of the data packets originating from source A is no longer possible. It is however also possible that the period of time has a predetermined length of time which is for instance chosen such that it is unlikely that re-ordering is still possible once the predetermined length of time has passed. Figure 8 to figure 11 illustrate the situation after expiration the period of time, either due to the fact that the period of time comprises a predetermined length of time which has passed, or due to the fact that the switch has been informed that re-ordering of the data packet is no longer possible. Data packets 5,6,7 from source address A may for instance again be forwarded by switch S1 along path I towards switch S2. These data packets are in that case received by port p1 and all forwarded by switch S2 towards destination address B.

Please amend the Abstract as follows:

Abstract

Communication network ~~comprising~~including a source and a switch for receiving and forwarding data packets originating from the source, wherein the network ~~comprises~~includes at least two mutually different routing paths between the source and the switch, wherein the switch ~~comprises~~includes at least two incoming ports for receiving the data packets originating from the source, wherein the switch is arranged to discard for a period of time any data packet originating from the source at the first one of the at least two incoming ports upon receiving a data packet originating from the source at the second one of the at least two incoming ports after receiving a data packet originating from the source at the first one of the at least two incoming ports.